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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/687,745	ROULEAU, GORDON
	Examiner	Art Unit
	Joan B. Naurot Ton	2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 04 September 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-16 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

This second action non-final is in response to arguments filed on 09/04/2007.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange et al, hereinafter referred to as Lange (US patent 6751191) in view of McNamara (US patent 6262976), and Ames et al, hereinafter referred to as Ames (US patent 6058429)

Regarding claim 1:

Regarding claim 1:

Lange discloses in a primary access device ("primary router" abstract, line 3 which provides "primary Internet access" abstract, line 10) connecting a first network to a second network (Abstract diagram, "Ethernet" and Internet backbone) over a primary connection, (Col 2, lines 57-58, "primary connection") a method for providing a backup

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connection between said first network and said second network, (Col 2, lines 55-58, "provides an improved backup Internet access service that carries Internet traffic" from the Ethernet to the backbone) said method comprising: detecting a failure in said primary connection; (Col 8, lines 3 and 4: "detect a failure to provide internet access via the primary router")

receiving, at said primary access device, a data packet originating from said first network (Col 7, lines 11-12, "primary router...the primary router for directing data to/from a primary Internet backbone") backup access device, ("apparatus for providing secondary Internet access" abstract, last two lines) and backup connection, ("secondary Internet access") and enables a transmittal of said received data packet to said second network over said connection. (abstract diagram in which the router 210 connects the Ethernet to the Internet Backbone 232. and in which data is directed from the backup router 210 to the Internet Backbone. Abstract lines 4-5 and diagram in Abstract)

Lange discloses all the limitations including the backup access device and backup connection as disclosed above except for: having a destination address at the ISO datalink layer 2; and replacing, in said data packet, said destination address with a device datalink address identifying a device capable of providing said connection; whereby said replacing of said destination address with said device datalink address enables a transmittal of said received data packet.

McNamara discloses having a destination address at the ISO datalink layer 2; (Col 4, lines 20-25 discloses "The switch tables are

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based on Data Link Layer(OSI Model level 2) information in each data packet header so that incoming packets are forwarded to a switch port based on the packet's destination address.")

The general concept of having a destination address at the ISO datalink layer 2 is well known in the art as illustrated by McNamara who discloses a having a destination address at the ISO datalink layer 2.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of having a destination address at the ISO datalink layer 2 in his advantageous method as taught by McNamara in order to use a widely known networking standard protocol to forward the data packets.

Ames discloses replacing, in said data packet, said destination address with a device datalink address identifying a device capable of providing said connection; whereby said replacing of said destination address with said device datalink address enables a transmittal of said received data packet. (Col 13, lines 19-23 discloses "replace in the packet the data link layer destination address associated with the router with the data link layer address associated with the second device; and transmit the packet through the port of the first set of ports to which the second device is connected.")

The general concept of replacing, in said data packet, said destination address with a device datalink address identifying a device capable of providing said connection; whereby said replacing of said destination address with said device datalink address enables a transmittal of said received data packet is well known in the art as illustrated

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by Ames who discloses replacing, in said data packet, said destination address with a device datalink address identifying a device capable of providing said connection; whereby said replacing of said destination address with said device datalink address enables a transmittal of said received data packet.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of replacing, in said data packet, said destination address with a device datalink address identifying a device capable of providing said connection; whereby said replacing of said destination address with said device datalink address enables a transmittal of said received data packet in his advantageous method as taught by Ames in order to use the features of the OSI protocol to forward the packets.

Regarding claim 2:

Lange discloses wherein said first network is a local area network (LAN).
(abstract, "Ethernet")

5. Claims 3-5, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange, Ames, and McNamara in view of Liping Zhang (US Patent number 6108345, dated August 22, 2000).

Regarding claims 3 and 14:

Zhang discloses the system wherein said second network is a wide area network (WAN) "two local area networks communicating ...with a wide area network." Col 3, line 36.)

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The general concept of providing a wide area network as a second network is well known in the art as illustrated by Zhang which discloses a wide area network as a second network. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange of his advantageous method as taught by Zhang in order to provide network communications.

Regarding claim 4:

Lange discloses wherein said local area network is an Ethernet-like network.
(abstract diagram on front page of patent "Ethernet")

Regarding claim 5:

Zhang discloses the method, wherein said wide area network is an IP-based network. (Col 4, line 1, "WAN such as the internet")

The general concept of providing a wide area network as an IP-based network is well known in the art as illustrated by Zhang which discloses a wide area network as an IP-based network. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange of his advantageous method as taught by Zhang in order to provide network communications.

2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lange, McNamara, Ames, and Zhang as applied to claim 5 and further in view of Katsume et al (IEEE publication)

Regarding claim 10:

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Lange discloses the method as claimed in claim 5, further comprising creating a direct connection between said primary access device and said backup access device (abstract diagram connecting router 105 primary to router 210 backup and "data traffic is automatically routed from primary router 105 to backup router 210 to provide backup Internet connectivity." Col 5, lines 14-16) and backup access device using direct connection. (router 210 in abstract is directly connected to router 105).

Lange discloses all the limitations as disclosed above except for an ISO layer 2 datalink and further providing said data packet having destination address replaced with device address to said device using said ISO layer 2 datalink connection.

Ames discloses ISO layer 2 datalink (Col 1, line 27) and further providing said data packet having destination address replaced with device address to said device using said ISO layer 2 datalink connection. (Col 13, lines 19-23 discloses "replace in the packet the data link layer destination address associated with the router with the data link layer address associated with the second device; and transmit the packet through the port of the first set of ports to which the second device is connected.")

The general concept of providing an ISO layer 2 datalink and further providing said data packet having destination address replaced with device address to said device using said ISO layer 2 datalink connection is well known in the art as illustrated by Ames who discloses an ISO layer 2 datalink and further providing said data packet having destination address replaced with device address to said device using said ISO layer 2 datalink connection.

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It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of an ISO layer 2 datalink and further providing said data packet having destination address replaced with device address to said device using said ISO layer 2 datalink connection in his advantageous method as taught by Ames in order to use the most widely known protocol to forward the packets according to the OSI reference model.

Katsume discloses using a direct datalink connection. (P 1 Col 2, 6 lines from bottom, "direct data-link layer connection")

The general concept of providing a direct datalink connection and using it is well known in the art as illustrated by Katsume who discloses a direct datalink connection and using it.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of direct datalink connection and using the direct datalink connection in order to transmit packets belonging to the flow which "are transmitted over the data-link connection without passing through intermediate routers..." as stated in Katsume, 4 lines from the bottom of the first page, 2nd column.

4. Claims 11, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lange and Ames.

Regarding claim 11:

Lange discloses a backup system for providing a backup connection (Abstract, lines 1-2. "...system for providing secondary or backup Internet access...") between a

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first network and a second network (Abstract diagram, "Ethernet" and "Internet Backbone") in response to a failure of a primary connection between said first network and said second network, ("detecting a failure to provide Internet access via the primary router" abstract, abstract, starting four lines from bottom) said backup system ("secondary Internet access" last two lines of abstract) comprising: a backup access device ("secondary router" abstract, line 5) for providing said backup connection ("backup Internet access....when the primary connection to the Internet fails" Col 2, lines 62-65) a primary access device, (Router 105, abstract) connected to said backup access device, (Router 105 primary is connected to Router 210 backup and see Col 5, lines 7-8) providing said primary connection ("primary connection" Col 2, lines 57-58) between said first network and said second network (abstract, "Ethernet" and "Internet Backbone) and, in response to said failure, ("primary connection to the Internet fails") enables the transmittal of said data packet to said second network over said backup connection. (Col 2, lines 55-59, "automatically carries Internet traffic when the primary connection fails" in which the backup router transmits the data in case of connection failure. Col 5, lines 35-40) backup access device (router 210, abstract)

Lange discloses all the limitations as disclosed except for and having a device address

at the ISO layer 2 datalink layer; replacing the destination address of an incoming data packet, at said datalink layer, with said device datalink address; whereby said replacing of said destination address with said device address enables the transmittal of said data packet over said connection.

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Ames discloses having a device address at the ISO layer 2 datalink layer and replacing the destination address of an incoming data packet, at said datalink layer, with said device datalink address; whereby said replacing of said destination address with said device address enables the transmittal of said data packet over said connection. (Col 13, lines 19-23 discloses "replace in the packet the data link layer destination address associated with the router with the data link layer address associated with the second device; and transmit the packet through the port of the first set of ports to which the second device is connected.")

The general concept of replacing the destination address of an incoming data packet, at said datalink layer, with said device datalink address; whereby said replacing of said destination address with said device address enables the transmittal of said data packet over said connection is well known in the art as illustrated by Ames who discloses replacing the destination address of an incoming data packet, at said datalink layer, with said device datalink address; whereby said replacing of said destination address with said device address enables the transmittal of said data packet over said connection.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of replacing the destination address of an incoming data packet, at said datalink layer, with said device datalink address; whereby said replacing of said destination address with said device address enables the transmittal of said data packet over said connection in his advantageous method as taught by Ames in order to forward packets based on the OSI reference model.

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Regarding claim 12:

Lange discloses wherein said primary access device and said backup access device are connected using an Ethernet. (Abstract diagram, the routers are connected through an Ethernet)

Regarding claim 13:

Lange discloses wherein said first network is a local area network (LAN).
(abstract, "Ethernet")

1. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lange, Ames, McNamara, and Zhang as applied to claim 4, and further in view of Wils et al, hereinafter referred to as Wils (US patent 6397260)

Regarding claim 7:

Lange also discloses all the limitations as disclosed except for further comprising performing an ARP request and further wherein said backup access device datalink address is provided by said backup access device in response to said ARP request

Wils discloses an ARP request and further wherein said backup access device datalink address is provided by said backup access device in response to said ARP request. (Col 3, lines 1-1- discloses "In one embodiment the load sharing technique is used on the Internet. The forwarding route is identified by an Internet Protocol (IP)

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address, and the source nodes and routers employ the Address Resolution Protocol (ARP) to

exchange address request and response messages. The source addresses examined by the routers are layer-2 addresses such as Ethernet Media Access Control (MAC) addresses, and the identifiers returned by the routers are used to form layer-2 addresses for the routers. The technique uses standard Internet protocols to achieve load sharing in an automatic fashion.”)

The general concept of providing an ARP request and wherein said backup access device datalink address is provided by said backup access device in response to said ARP request is well known in the art as illustrated by Wils which discloses wherein said backup access device datalink address is provided by said backup access device in response to said ARP request. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange of his advantageous method as taught by Wils in order to provide load sharing.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lange, Ames, McNamara , and Liping Zhang as applied to claim 5, and further in view of Coile et al, hereinafter referred to as Coile, (US patent number 6298063, dated October 2, 2001)

Regarding claim 6:

Lange discloses all the limitations of claim 6 except for the method, wherein said data packet is a domain name server request.

Coile teaches a domain name server request with a data packet. Since Coile uses TCP/IP, (Column 4 of the specification, line 38) the request to the domain name server (Column 5, lines 7-11) comes in the form of a data packet.

The general concept of providing a domain name server request in the form of a data packet is well known in the art as illustrated by Coile which discloses a packet in a domain name server request.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of a data packet domain name server request as taught by Coile in order to allow the system and method for the capability of "providing backup ...machines" as stated by Coile in Column 1 of the specification, lines 25-26.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lange, Ames, McNamara, and Liping Zhang as applied to claim 5, further in view of Chen et al (US patent number 6715098), hereinafter referred to as Chen.

Lange discloses all the limitations of claim 9 except for the method step wherein said backup access device IP network station address is provided to said primary access device at a predetermined time.

Chen teaches a backup access device providing an IP network station address to the primary access device. ("An alternative implementation is that the standby appliance is notified of the change and a request is sent from the standby appliance to the primary appliance to retrieve the new set of parameters". Column 6, lines 35-38. Chen also discloses that his implementation causes the address of the standby

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appliance to be identical to the primary address after notification of the shutdown, Abstract, last 7 lines, so the address of the backup device is known by the primary access device before the device fails, or at a predetermined time. Since Chen uses Fibrechannel and IP (Column 3, line 60), he also discloses that the device has an IP network station address.

The general concept of providing a backup access device IP network station address to a primary device is well known in the art as illustrated by Chen who discloses an address being provided to a primary access device at a predetermined time.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange in his advantageous method to include providing an address to a primary device at a predetermined time as taught by Chen in order to provide "fail over" as stated by Chen in Column 1, line 17 of the specification.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lange, Ames, McNamara, and Liping Zhang as applied to claim 5 above, and further in view of Li et al (US patent 6012088) hereinafter referred to as Li, and Cochran (US patent number 7058850, dated June 6, 2006, and filed on July 31, 2002), and Mendiftto et al, hereinafter referred to as Mendiftto (US patent 6968389)

Regarding claim 9:

Lange discloses all the limitations of claim 9 except for wherein said primary access device comprises domain name server relay and cache service, further

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comprising emptying said cache after said detecting of said failure in said primary connection.

Li discloses having the primary access device comprise a domain name server relay. ("In addition to routing network data, an Internet access device may provide one or more related services to the lan such as a domain name service, a DHCP service, security, electronic mail, etc." The services implicitly includes the server and specifically the services, in order to operate. Col 3, lines 40-45, and Col 22, line 41 discloses the primary access device.)

The general concept of providing domain name server relay is well known in the art as illustrated by Li who discloses domain name services in a primary access device. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of domain name services in a primary access device in his advantageous method as taught by Li in order to improve the access device functions.

Menditto discloses cache service (Column 11, lines 64-67, describes cache service because Menditto discloses "When the connection list becomes full, the current connection may be saved by removing the least recently used connection in the connection list." Menditto also discloses a proxy cache. Col 3, line 46)

The general concept of cache service is well known in the art as illustrated by Menditto which discloses cache service and domain name server relay in a router method.

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It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange of in his advantageous method as taught by Mendiftto in "provide redundancy, fail over characteristics, and extra capacity" as stated by Mendiftto in Column 6, lines 14-15.

Cochran discloses emptying a cache after detecting a failure in a primary connection. ("a Write request 0/301 has failed to arrive at the second mass-storage device due to an error within the communications link, or in the communications-link related drivers or protocol engines..." Column 13 of the specification, lines 23-26. This results in "...initiating the bit map and cache purge operations..." Column 13 of the specification, lines 42 and 43.)

The general concept of purging a cache after device failure is well known in the art as illustrated by Cochran who discloses purging a cache in a communications link method. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of purging a cache in response to device failure in order to prevent "failures that interrupt data flow" as stated by Cochran in Column 1 of the specification, lines 11-12.

10. Claim 15 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lange and Ames in view of Li et al (US patent 6012088) hereinafter referred to as Li.

Regarding claim 15:

Lange discloses all the limitations of claim 15 except for having the primary access device comprise a domain name server relay .

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Li discloses having the primary access device comprise a domain name server relay.

(“In addition to routing network data, an

Internet access device may provide one or more related services to the lan such as a domain name service, a DHCP service, security, electronic mail, etc.” The services implicitly includes the server in order to operate. Col 3, lines 40-45, and Col 22, line 41 discloses the primary access device.)

The general concept of providing domain name server relay is well known in the art as illustrated by Li who discloses domain name services in a primary access device. It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of domain name services in a primary access device in his advantageous method as taught by Li in order to improve the access device functions.

Regarding claim 16:

Lange discloses all the limitations of claim 16 except for wherein said primary access device further comprises a DHCP server.

(“In addition to routing network data, an

Internet access device may provide one or more related services to the lan such as a domain name service, a DHCP service, security, electronic mail, etc.” The services implicitly includes the server in order to operate. Col 3, lines 40-45, and Col 22, line 41 discloses the primary access device.)

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The general concept of providing domain name server relay is well known in the art as illustrated by Li who discloses DHCP services in a primary access device which would require the server.

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Lange to include the use of DHCP server in a primary access device in his advantageous method as taught by Li in order to improve the access device functions

Summary of Arguments and Response

Points A-D, F, and I are not deemed moot in view of the new grounds of rejection.

Point E: Applicant argues that Liping Zhang does not have a first network as a LAN.

As to point E, Zhang also discloses one LAN connected to a second LAN, Col 4, lines 24-26, therefore using a first LAN is well known in the art and since both Zhang and Applicant's claims and specification involve connections between networks the motivation to combine is proper.

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Point G: Applicant argues that Jayasenan does not recite the limitations in the office action.

As to point G, a similar rejection has been made under Chen and the rejection under Jayasenan has been removed.

Point H: Applicant argues that Cochran needed to be “modified” in order to purge the cache after device failure.

As to point H, writing that Cochran needed to be modified was a typo and Lange was to be modified, not Cochran.

Point J: Applicant argues that Zhang does not teach DHCP or DNS relay.

As to point J: a new rejection under Li has been made which implicitly includes the relay service and the DHCP server since it provides the DHCP which would require the DHCP server, and DNS services which includes the relay service.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joan B. Naurot Ton whose telephone number is 571-270-1595. The examiner can normally be reached on M-Th 9 to 6:30 (flex sched) and alt Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JBNT



JASON CARDONE
SUPERVISORY PATENT EXAMINER

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